Chengde Gao

List of Publications by Year
in descending order

126 papers	7,529 citations	94381 37 h-index	54882 84 g-index
126 all docs	126 docs citations	126 times ranked	12391 citing authors

#	Article	IF	Citations
1	Magnetostrictive alloys: Promising materials for biomedical applications. Bioactive Materials, 2022, 8, 177-195.	8.6	44
2	Pre-oxidation induced in situ interface strengthening in biodegradable Zn/nano-SiC composites prepared by selective laser melting. Journal of Advanced Research, 2022, 38, 143-155.	4.4	33
3	A dual redox system for enhancing the biodegradability of Fe-C-Cu composite scaffold. Colloids and Surfaces B: Biointerfaces, 2022, 213, 112431.	2.5	5
4	Dual alloying improves the corrosion resistance of biodegradable Mg alloys prepared by selective laser melting. Journal of Magnesium and Alloys, 2021, 9, 305-316.	5.5	45
5	Dual-functional scaffolds of poly(L-lactic acid)/nanohydroxyapatite encapsulated with metformin: Simultaneous enhancement of bone repair and bone tumor inhibition. Materials Science and Engineering C, 2021, 120, 111592.	3.8	33
6	In Vitro Corrosion Resistance and Antibacterial Performance of Novel Feâ€“<i>x</i>Cu Biomedical Alloys Prepared by Selective Laser Melting. Advanced Engineering Materials, 2021, 23, 2001000.	1.6	15
7	Corrosion and antibacterial performance of novel selective-laser-melted (SLMed) Ti-xCu biomedical alloys. Journal of Alloys and Compounds, 2021, 864, 158415.	2.8	29
8	A Continuous MgF 2 Network Structure Encapsulated Mg Alloy Prepared by Selective Laser Melting for Enhanced Biodegradation Resistance. Advanced Engineering Materials, 2021, 23, 2100389.	1.6	4
9	Comparison of the biodegradation of ZK30 subjected to solid solution treating and selective laser melting. Journal of Materials Research and Technology, 2021, 10, 722-729.	2.6	15
10	Biodegradation, Antibacterial Performance, and Cytocompatibility of a Novel ZK30-Cu-Mn Biomedical Alloy Produced by Selective Laser Melting. International Journal of Bioprinting, 2021, 7, 300.	1.7	3
11	A magnetic micro-environment in scaffolds for stimulating bone regeneration. Materials and Design, 2020, 185, 108275.	3.3	101
12	Mnâ€promoting formation of a longâ€period stackingâ€ordered phase in laserâ€melted Mg alloys to enhance degradation resistance. Materials and Corrosion - Werkstoffe Und Korrosion, 2020, 71, 553-563.	0.8	3
13	Effect of Alloying Mn by Selective Laser Melting on the Microstructure and Biodegradation Properties of Pure Mg. Metals, 2020, 10, 1527.	1.0	5
14	Advances in biocermets for bone implant applications. Bio-Design and Manufacturing, 2020, 3, 307-330.	3.9	16
15	Influence of graphene oxide (GO) on microstructure and biodegradation of ZK30-xGO composites prepared by selective laser melting. Journal of Magnesium and Alloys, 2020, 8, 952-962.	5.5	28
16	In Situ Generation of Hydroxyapatite on Biopolymer Particles for Fabrication of Bone Scaffolds Owning Bioactivity. ACS Applied Materials & Interfaces, 2020, 12, 46743-46755.	4.0	58
17	Island-to-acicular alteration of second phase enhances the degradation resistance of biomedical AZ61 alloy. Journal of Alloys and Compounds, 2020, 835, 155397.	2.8	9
18	Interfacial reinforcement in bioceramic/biopolymer composite bone scaffold: The role of coupling agent. Colloids and Surfaces B: Biointerfaces, 2020, 193, 111083.	2.5	76

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19	Interfacial strengthening by reduced graphene oxide coated with MgO in biodegradable Mg composites. Materials and Design, 2020, 191, 108612.	3.3	57
20	In situ decomposition of Ti₂AlN promoted interfacial bonding in ZnAl-Ti₂AlN biocomposites for bone repair. Materials Research Express, 2020, 7, 025402.	0.8	4
21	Enhanced osteoinductivity and corrosion resistance of dopamine/gelatin/rhBMP-2â€“coated Î²-TCP/Mg-Zn orthopedic implants: An in vitro and in vivo study. PLoS ONE, 2020, 15, e0228247.	1.1	13
22	TiO₂-Induced In Situ Reaction in Graphene Oxide-Reinforced AZ61 Biocomposites to Enhance the Interfacial Bonding. ACS Applied Materials & Interfaces, 2020, 12, 23464-23473.	4.0	69
23	MnO2 catalysis of oxygen reduction to accelerate the degradation of Fe-C composites for biomedical applications. Corrosion Science, 2020, 170, 108679.	3.0	31
24	Rod-like Eutectic Structure in Biodegradable Znâ€“Alâ€“Sn Alloy Exhibiting Enhanced Mechanical Strength. ACS Biomaterials Science and Engineering, 2020, 6, 3821-3831.	2.6	11
25	Biodegradation, Antibacterial Performance, and Cytocompatibility of a Novel ZK30-Cu-Mn Biomedical Alloy Produced by Selective Laser Melting. International Journal of Bioprinting, 2020, 7, 300.	1.7	14
26	Formation and characteristic corrosion behavior of alternately lamellar arranged Î± and Î² in as-cast AZ91 Mg alloy. Journal of Alloys and Compounds, 2019, 770, 549-558.	2.8	49
27	Nano-SiC reinforced Zn biocomposites prepared via laser melting: Microstructure, mechanical properties and biodegradability. Journal of Materials Science and Technology, 2019, 35, 2608-2617.	5.6	80
28	Strong corrosion induced by carbon nanotubes to accelerate Fe biodegradation. Materials Science and Engineering C, 2019, 104, 109935.	3.8	18
29	Molybdenum disulfide nanosheets embedded with nanodiamond particles: co-dispersion nanostructures as reinforcements for polymer scaffolds. Applied Materials Today, 2019, 17, 216-226.	2.3	116
30	Biodegradable metallic bone implants. Materials Chemistry Frontiers, 2019, 3, 544-562.	3.2	150
31	Highly biodegradable and bioactive Fe-Pd-bredigite biocomposites prepared by selective laser melting. Journal of Advanced Research, 2019, 20, 91-104.	4.4	75
32	Graphene Oxide Reinforced Iron Matrix Composite With Enhanced Biodegradation Rate Prepared by Selective Laser Melting. Advanced Engineering Materials, 2019, 21, 1900314.	1.6	17
33	Montmorillonite with unique interlayer space imparted polymer scaffolds with sustained release of Ag+. Ceramics International, 2019, 45, 11517-11526.	2.3	11
34	Characterizations and interfacial reinforcement mechanisms of multicomponent biopolymer based scaffold. Materials Science and Engineering C, 2019, 100, 809-825.	3.8	90
35	Disperse magnetic sources constructed with functionalized Fe3O4 nanoparticles in poly- -lactic acid scaffolds. Polymer Testing, 2019, 76, 33-42.	2.3	24
36	Refined Lamellar Eutectic in Biomedical Znâ€“Alâ€“Zr Alloys for Mechanical Reinforcement. Advanced Engineering Materials, 2019, 21, 1801322.	1.6	5

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37	Uniform degradation mode and enhanced degradation resistance of Mg alloy via a long period stacking ordered phase in the grain interior. Materials Research Express, 2019, 6, 065406.	0.8	3
38	Improved biodegradation resistance by grain refinement of novel antibacterial ZK30-Cu alloys produced via selective laser melting. Materials Letters, 2019, 237, 253-257.	1.3	57
39	3D honeycomb nanostructure-encapsulated magnesium alloys with superior corrosion resistance and mechanical properties. Composites Part B: Engineering, 2019, 162, 611-620.	5.9	124
40	A continuous net-like eutectic structure enhances the corrosion resistance of Mg alloys. International Journal of Bioprinting, 2019, 5, 207.	1.7	15
41	Hydrolytic Expansion Induces Corrosion Propagation for Increased Fe Biodegradation. International Journal of Bioprinting, 2019, 6, 248.	1.7	3
42	Microstructure, biodegradation, antibacterial and mechanical properties of ZK60-Cu alloys prepared by selective laser melting technique. Journal of Materials Science and Technology, 2018, 34, 1944-1952.	5.6	80
43	Regulating Degradation Behavior by Incorporating Mesoporous Silica for Mg Bone Implants. ACS Biomaterials Science and Engineering, 2018, 4, 1046-1054.	2.6	67
44	Selective laser melting of Znâ€“Ag alloys for bone repair: microstructure, mechanical properties and degradation behaviour. Virtual and Physical Prototyping, 2018, 13, 146-154.	5.3	49
45	A Multimaterial Scaffold With Tunable Properties: Toward Bone Tissue Repair. Advanced Science, 2018, 5, 1700817.	5.6	264
46	A combined strategy to enhance the properties of Zn by laser rapid solidification and laser alloying. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 82, 51-60.	1.5	103
47	Biodegradation mechanisms of selective laser-melted Mgâ€“<i>x</i>Alâ€“Zn alloy: grain size and intermetallic phase. Virtual and Physical Prototyping, 2018, 13, 59-69.	5.3	30
48	Lanthanum-Containing Magnesium Alloy with Antitumor Function Based on Increased Reactive Oxygen Species. Applied Sciences (Switzerland), 2018, 8, 2109.	1.3	14
49	Ag-Introduced Antibacterial Ability and Corrosion Resistance for Bio-Mg Alloys. BioMed Research International, 2018, 2018, 1-13.	0.9	16
50	Antibacterial Capability, Physicochemical Properties, and Biocompatibility of nTiO2 Incorporated Polymeric Scaffolds. Polymers, 2018, 10, 328.	2.0	29
51	Fabricating the nanostructured surfaces of CaSiO3 scaffolds. Applied Surface Science, 2018, 455, 1150-1160.	3.1	14
52	An nMgO containing scaffold: Antibacterial activity, degradation properties and cell responses. International Journal of Bioprinting, 2018, 4, 120.	1.7	20
53	Physical stimulations and their osteogenesis-inducing mechanisms. International Journal of Bioprinting, 2018, 4, 138.	1.7	30
54	Additive manufacturing of bone scaffolds. International Journal of Bioprinting, 2018, 5, 148.	1.7	120

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55	A multi-scale porous scaffold fabricated by a combined additive manufacturing and chemical etching process for bone tissue engineering. International Journal of Bioprinting, 2018, 4, 133.	1.7	2
56	Preparation and characterization of laser-melted Mgâ€“Snâ€“Zn alloys for biomedical application. Journal of Materials Science: Materials in Medicine, 2017, 28, 13.	1.7	19
57	Nanodiamond reinforced polyvinylidene fluoride/bioglass scaffolds for bone tissue engineering. Journal of Porous Materials, 2017, 24, 249-255.	1.3	10
58	A combined nanostructure constructed by graphene and boron nitride nanotubes reinforces ceramic scaffolds. Chemical Engineering Journal, 2017, 313, 487-497.	6.6	57
59	Graphene oxide as an interface phase between polyetheretherketone and hydroxyapatite for tissue engineering scaffolds. Scientific Reports, 2017, 7, 46604.	1.6	73
60	Carbon nanotube, graphene and boron nitride nanotube reinforced bioactive ceramics for bone repair. Acta Biomaterialia, 2017, 61, 1-20.	4.1	170
61	Biosilicate scaffolds for bone regeneration: influence of introducing SrO. RSC Advances, 2017, 7, 21749-21757.	1.7	23
62	Mechanical reinforcement of bioceramics scaffolds via fracture energy dissipation induced by sliding action of MoS2 nanoplatelets. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 423-433.	1.5	14
63	Nd-induced honeycomb structure of intermetallic phase enhances the corrosion resistance of Mg alloys for bone implants. Journal of Materials Science: Materials in Medicine, 2017, 28, 130.	1.7	25
64	A mesoporous silica composite scaffold: Cell behaviors, biomineralization and mechanical properties. Applied Surface Science, 2017, 423, 314-321.	3.1	19
65	Bone biomaterials and interactions with stem cells. Bone Research, 2017, 5, 17059.	5.4	503
66	Microstructure Evolution and Biodegradation Behavior of Laser Rapid Solidified Mgâ€“Alâ€“Zn Alloy. Metals, 2017, 7, 105.	1.0	37
67	Calcium Silicate Improved Bioactivity and Mechanical Properties of Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) Scaffolds. Polymers, 2017, 9, 175.	2.0	28
68	Mechanically Strong CaSiO3 Scaffolds Incorporating B2O3-ZnO Liquid Phase. Applied Sciences (Switzerland), 2017, 7, 387.	1.3	3
69	Biodegradation Resistance and Bioactivity of Hydroxyapatite Enhanced Mg-Zn Composites via Selective Laser Melting. Materials, 2017, 10, 307.	1.3	36
70	Rare Earth Element Yttrium Modified Mg-Al-Zn Alloy: Microstructure, Degradation Properties and Hardness. Materials, 2017, 10, 477.	1.3	37
71	Silane Modified Diopside for Improved Interfacial Adhesion and Bioactivity of Composite Scaffolds. Molecules, 2017, 22, 511.	1.7	18
72	Synergistic Effect of Carbon Nanotubes and Graphene on Diopside Scaffolds. BioMed Research International, 2016, 2016, 1-8.	0.9	4

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73	A nano-sandwich construct built with graphene nanosheets and carbon nanotubes enhances mechanical properties of hydroxyapatite–polyetheretherketone scaffolds. International Journal of Nanomedicine, 2016, Volume 11, 3487-3500.	3.3	46
74	Tunable Degradation Rate and Favorable Bioactivity of Porous Calcium Sulfate Scaffolds by Introducing Nano-Hydroxyapatite. Applied Sciences (Switzerland), 2016, 6, 411.	1.3	6
75	Functionalization of Calcium Sulfate/Bioglass Scaffolds with Zinc Oxide Whisker. Molecules, 2016, 21, 378.	1.7	19
76	Characterization and Bioactivity Evaluation of (Polyetheretherketone/Polyglycolicacid)-Hydroyapatite Scaffolds for Tissue Regeneration. Materials, 2016, 9, 934.	1.3	32
77	A Novel MgO-CaO-SiO2 System for Fabricating Bone Scaffolds with Improved Overall Performance. Materials, 2016, 9, 287.	1.3	24
78	Development of bioceramic bone scaffolds by introducing triple liquid phases. Journal of Materials Research, 2016, 31, 3498-3505.	1.2	3
79	The microstructure, mechanical properties and degradation behavior of laser-melted Mg Sn alloys. Journal of Alloys and Compounds, 2016, 687, 109-114.	2.8	42
80	System development, formability quality and microstructure evolution of selective laser-melted magnesium. Virtual and Physical Prototyping, 2016, 11, 173-181.	5.3	61
81	Polyetheretherketone/poly (glycolic acid) blend scaffolds with biodegradable properties. Journal of Biomaterials Science, Polymer Edition, 2016, 27, 1434-1446.	1.9	27
82	A space network structure constructed by tetraneedlelike ZnO whiskers supporting boron nitride nanosheets to enhance comprehensive properties of poly(L-lacti acid) scaffolds. Scientific Reports, 2016, 6, 33385.	1.6	25
83	Improvement in degradability of 58s glass scaffolds by ZnO and Î²-TCP modification. Bioengineered, 2016, 7, 342-351.	1.4	7
84	MicroRNAs regulate signaling pathways in osteogenic differentiation of mesenchymal stem cells (Review). Molecular Medicine Reports, 2016, 14, 623-629.	1.1	79
85	Boron Nitride Nanotubes Reinforce Tricalcium Phosphate Scaffolds and Promote the Osteogenic Differentiation of Mesenchymal Stem Cells. Journal of Biomedical Nanotechnology, 2016, 12, 934-947.	0.5	18
86	Tailoring properties of porous Poly (vinylidene fluoride) scaffold through nano-sized 58s bioactive glass. Journal of Biomaterials Science, Polymer Edition, 2016, 27, 97-109.	1.9	15
87	Mechanical and structural characterization of diopside scaffolds reinforced with graphene. Journal of Alloys and Compounds, 2016, 655, 86-92.	2.8	25
88	A 45S5 Bioactive Glass Scaffold Reinforced with ZnO and MgO. Journal of Biomaterials and Tissue Engineering, 2016, 6, 98-106.	0.0	3
89	Development of a Novel Double Liquid Phase for Sintering <I>Î²</I>-Tricalcium Phosphate Scaffold. Journal of Biomaterials and Tissue Engineering, 2016, 6, 788-797.	0.0	0
90	A bioactive glass nanocomposite scaffold toughed by multi-wall carbon nanotubes for tissue engineering. Journal of the Ceramic Society of Japan, 2015, 123, 485-491.	0.5	15

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91	Analysis of 3D Printed Diopside Scaffolds Properties for Tissue Engineering. Medziagotyra, 2015, 21, .	0.1	1
92	Enhanced Stability of Calcium Sulfate Scaffolds with 45S5 Bioglass for Bone Repair. Materials, 2015, 8, 7498-7510.	1.3	14
93	Microstructure, Mechanical, and Biological Properties of Porous Poly(vinylidene fluoride) Scaffolds Fabricated by Selective Laser Sintering. International Journal of Polymer Science, 2015, 2015, 1-9.	1.2	3
94	Mechanisms of tetraneedlelike ZnO whiskers reinforced forsterite/bioglass scaffolds. Journal of Alloys and Compounds, 2015, 636, 341-347.	2.8	17
95	Calcium sulfate bone scaffolds with controllable porous structure by selective laser sintering. Journal of Porous Materials, 2015, 22, 1171-1178.	1.3	15
96	Selective laser sintering of Î²-TCP/nano-58S composite scaffolds with improved mechanical properties. Materials and Design, 2015, 84, 395-401.	3.3	16
97	Toughening and strengthening mechanisms of porous akermanite scaffolds reinforced with nano-titania. RSC Advances, 2015, 5, 3498-3507.	1.7	36
98	Microstructure Evolution and Mechanical Properties Improvement in Liquid-Phase-Sintered Hydroxyapatite by Laser Sintering. Materials, 2015, 8, 1162-1175.	1.3	21
99	Diopside modified porous polyglycolide scaffolds with improved properties. RSC Advances, 2015, 5, 54822-54829.	1.7	18
100	Nano SiO2 and MgO Improve the Properties of Porous Î²-TCP Scaffolds via Advanced Manufacturing Technology. International Journal of Molecular Sciences, 2015, 16, 6818-6830.	1.8	29
101	Akermanite scaffolds reinforced with boron nitride nanosheets in bone tissue engineering. Journal of Materials Science: Materials in Medicine, 2015, 26, 188.	1.7	28
102	Hydroxyapatite Whisker Reinforced 63s Glass Scaffolds for Bone Tissue Engineering. BioMed Research International, 2015, 2015, 1-8.	0.9	2,383
103	Graphene oxide reinforced poly(vinyl alcohol): nanocomposite scaffolds for tissue engineering applications. RSC Advances, 2015, 5, 25416-25423.	1.7	82
104	Mechanical Reinforcement of Diopside Bone Scaffolds with Carbon Nanotubes. International Journal of Molecular Sciences, 2014, 15, 19319-19329.	1.8	17
105	Preparation of micro/nanometer-sized porous surface structure of calcium phosphate scaffolds and the influence on biocompatibility. Journal of Materials Research, 2014, 29, 1144-1152.	1.2	8
106	Liquid Phase Sintered Ceramic Bone Scaffolds by Combined Laser and Furnace. International Journal of Molecular Sciences, 2014, 15, 14574-14590.	1.8	15
107	Current Progress in Bioactive Ceramic Scaffolds for Bone Repair and Regeneration. International Journal of Molecular Sciences, 2014, 15, 4714-4732.	1.8	243
108	Graphene-reinforced mechanical properties of calcium silicate scaffolds by laser sintering. RSC Advances, 2014, 4, 12782-12788.	1.7	35

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109	Microstructure, mechanical properties and in vitro bioactivity of akermanite scaffolds fabricated by laser sintering. Bio-Medical Materials and Engineering, 2014, 24, 2073-2080.	0.4	17
110	Bioactivity Improvement of Forsterite-Based Scaffolds with nano-58S Bioactive Glass. Materials and Manufacturing Processes, 2014, 29, 877-884.	2.7	21
111	Silicon carbide whiskers reinforced akermanite scaffolds for tissue engineering. RSC Advances, 2014, 4, 36868.	1.7	4
112	Calcium silicate ceramic scaffolds toughened with hydroxyapatite whiskers for bone tissue engineering. Materials Characterization, 2014, 97, 47-56.	1.9	42
113	A novel two-step sintering for nano-hydroxyapatite scaffolds for bone tissue engineering. Scientific Reports, 2014, 4, 5599.	1.6	124
114	Enhancement mechanisms of graphene in nano-58S bioactive glass scaffold: mechanical and biological performance. Scientific Reports, 2014, 4, 4712.	1.6	125
115	The microstructure evolution of nanohydroxapatite powder sintered for bone tissue engineering. Journal of Experimental Nanoscience, 2013, 8, 762-773.	1.3	22
116	Simulation of dynamic temperature field during selective laser sintering of ceramic powder. Mathematical and Computer Modelling of Dynamical Systems, 2013, 19, 1-11.	1.4	17
117	Enhanced sintering ability of biphasic calcium phosphate by polymers used for bone scaffold fabrication. Materials Science and Engineering C, 2013, 33, 3802-3810.	3.8	41
118	Grain Growth Associates Mechanical Properties in Nano-Hydroxyapatite Bone Scaffolds. Journal of Nanoscience and Nanotechnology, 2013, 13, 5340-5345.	0.9	7
119	DEVELOPMENT OF COMPLEX POROUS POLYVINYL ALCOHOL SCAFFOLDS: MICROSTRUCTURE, MECHANICAL, AND BIOLOGICAL EVALUATIONS. Journal of Mechanics in Medicine and Biology, 2013, 13, 1350034.	0.3	4
120	Correlation between properties and microstructure of laser sintered porous<i>Î²</i>-tricalcium phosphate bone scaffolds. Science and Technology of Advanced Materials, 2013, 14, 055002.	2.8	27
121	FABRICATION OPTIMIZATION OF NANOHYDROXYAPATITE ARTIFICIAL BONE SCAFFOLDS. Nano, 2012, 07, 1250015.	0.5	2
122	Microstructure analysis in the coupling region of fiber coupler with a novel electrical micro-heater. Optical Fiber Technology, 2011, 17, 541-545.	1.4	6
123	Structure and properties of nano-hydroxypatite scaffolds for bone tissue engineering with a selective laser sintering system. Nanotechnology, 2011, 22, 285703.	1.3	115
124	The Development of a Novel Fused Bi-Conical Taper Machine with an Electrical Resistance Micro-Heater. Advanced Science Letters, 2011, 4, 2032-2036.	0.2	1
125	Structural Design and Experimental Analysis of a Selective Laser Sintering System with Nano-Hydroxyapatite Powder. Journal of Biomedical Nanotechnology, 2010, 6, 370-374.	0.5	50
126	Performance improvement of optical fiber coupler with electric heating versus gas heating. Applied Optics, 2010, 49, 4514.	2.1	4